

If you decide to use seed, choose the best possible grass cultivar or mixture for your site, and seed your lawn after the early spring when the soil and air have warmed enough to favour the germination and growth of your grass. The very best time to put seed down is late August or early September.

Use new seed or seed that has been stored in a cool, dry place, since not all seed germinates even when new, and older seed may have a higher percentage that doesn't germinate. Follow the directions for your seed mix and your site conditions to determine how much seed to use. Because grass seed takes a couple of weeks to germinate, then another couple of weeks to grow in, it needs watering for a longer time initially than sod does.

## Other Ground Covers

Along with, or as an alternative to a traditional grass lawn, you can add a richness of colour, shape, scent, and texture with trees, shrubs, wildflowers, native grasses, and herbs. These are often easier and less expensive to maintain than grass. Besides the many trees and shrubs on the market, some good plants to consider for Canada are creeping juniper, hostas, lily of the valley, creeping phlox, alyssum, spurge, sweet woodruff, thyme, and periwinkle. You might also like to include paving stones and mulches in your design. These may be the most practical solutions to high traffic areas in your yard.



## Remember



### Before Purchasing a Pesticide Product

- Identify the pest correctly.
- Use physical control methods and alternatives to pesticides.
- Read the label directions and safety precautions before buying

the product. The label must include the name of the pest to be controlled and the treatment location (e.g., indoor, outdoor, garden uses, pet treatment).

- Purchase only the quantity of product needed for the treatment.

- Alternatively, you may choose to hire a licensed pest control operator.

### When Using a Pesticide

- Carefully read all label instructions and precautions before using pesticides.
- Do not drink, eat or smoke while applying pesticides.
- Persons and pets should vacate the area during treatment. Cover or remove aquaria.
- If kitchen area is to be treated, cover or remove food, dishes and utensils.

### After Handling a Pesticide

- Always wash your hands thoroughly after handling any pesticide product.
- Do not permit persons or pets to contact treated surfaces until residue has dried completely.
- Provide adequate ventilation of treated areas after use.
- Wipe clean all surfaces that comes in direct contact with food, such as counters, tables and stovetops, including indoor and outdoor surfaces.
- Always store pesticides out of reach of children and pets and away from food and beverages.

## In Case of Accidental Poisoning

- Call a poison control centre immediately and seek medical attention.
- Take the pesticide container or label with you to the emergency facility or physician.
- Follow first aid statements on the label.
- In case of accidental poisoning of pets seek veterinary attention immediately.



## When Disposing of Pesticides

Do not reuse empty pesticide containers. Wrap and dispose of in household garbage.

Unused or partially used pesticide products should be disposed of at provincially or municipally designated household hazardous waste disposal sites.

## Use Common Sense

- These are general recommendations.
- Consult the label for specific instructions.
- When in doubt, contact a professional.



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# Establishing a Lawn



Canada

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## Establishing a Lawn

If you're like most people, you love your lawn, even with all the work involved. Besides being a great place to spend time, lawns serve many functions, such as filtering pollution, buffering temperatures, purifying water, preventing soil erosion, and decomposing waste.

Before you can do anything about establishing a lawn, or rehabilitating one that has been neglected over time, you should do a site assessment. This will include analyzing the soil (type, organic and inorganic layers, drainage, slope, aspect, fertility, pH), identifying insects, diseases, or weeds already present, and knowing about your geographic location and climate variables such as temperature, precipitation, and sunlight and shade.



You also need to decide what you want to use your lawn for and how much time, energy, and money you want to commit to its growth and maintenance. This will help you decide whether to put in a hardy, fairly low-maintenance lawn that's good for things like children's sports, or go for a higher maintenance, more ornamental lawn.

## Soil

Soil is composed of rock particles (sand, silt, and clay, from largest to smallest) and organic matter

(humus). It also contains many micro-organisms (tiny plants and animals) for further decomposition of rocks and organic matter (from anything previously living).

To tell what your soil is, fill a jar with soil and some water, mix it well, and leave it to settle. Each particle size will form its own layer. You can measure each layer and compare its height to the total height of the jar (e.g., if the sand layer is about half of the total height, then you have about 50% sand in your soil).

The best soil is a loam, which contains all three particle sizes, and of the loams, a sandy loam supports plant growth the best. It is ideal for lawns because it absorbs water easily and quickly, yet allows water, air, nutrients, plant roots, and organisms to move through it. Because of the variety of particle sizes, it naturally contains air space and is easily aerated.

Topsoil is the organically rich, usually very dark, layer just under your lawn. Grass needs at least 4" of topsoil to grow well. Subsoil is below this and it is often hard and poor in nutrients. Often when you're first trying to grow a lawn, especially if your house and yard are new, the topsoil has been removed, then the subsoil has been compacted by heavy equipment, and possibly some topsoil has then been returned. A site like this needs some rehabilitation and you may have to do more than the usual aeration and fertilization before you start a lawn on it. Also, remove anything from the soil that might cause problems, such as litter, rotting material, concrete, and plastics.

When putting in a new lawn, aerate and fertilize the soil, using compost or peat moss, add lime if needed and a layer of good topsoil so that the soil height is about 1" above that of any surrounding

turf. Top up any low spots within the lawn area. When you walk across the soil, it should be firm, but the top layer should be loose. Add some starter fertilizer to the top and water the soil well.



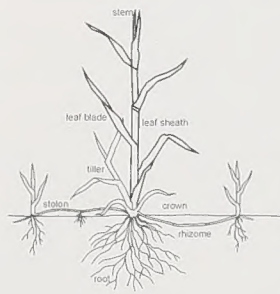
The pH represents the level of acid or alkalinity of your soil and is measured on a scale of 0 to 14, with values below 7 being acidic, values above 7 being alkaline and 7 being neutral. In most of Canada, soil should be slightly acidic (5.8–6.5) to allow the release of the nutrients required for grass to grow in most of Canada. If your soil is too acidic, such as in areas of high rainfall, you should add some lime to it to make it more alkaline. Add lime only when your grass is dry because it can be corrosive when wet. High acidity can also result from too high a peat content (natural or added) in your soil.

Soil can also be too alkaline, such as in southern Ontario where the bedrock is limestone and in areas that have very low rainfall. If your soil is alkaline, it needs sulphur added annually to make it more acidic. Have your soil checked every few years by a professional lab and adjust its pH if needed. The lab can also advise you on any other nutrients needed by your lawn.

## What is Grass?

Like other plants, grasses consist of leaves, stems, and roots. In grass, the leaves are known as blades and the lower parts of these that wrap around the stem are called sheaths. These are the energy producers for the plant, photosynthetic tissues that recycle carbon dioxide and water to produce sugar for the plant's growth, repair, and reproduction. And, as a by-product, oxygen for animals.

A grass may reproduce in several ways besides by seed. Grasses also reproduce using stolons (aboveground lateral stems) and rhizomes (belowground lateral stems). They also form new shoots, known as tillers, that are attached to the original plant and add to the fullness of the lawn.



## Which Grass is Best for You?

Most lawns in Canada consist of a variety of cold weather grasses, which have growth spurts in the spring and fall, such as Kentucky bluegrass, bentgrass, and some fine fescues. Your lawn may also have some tall fescues, ryegrasses, zoysia grass, Bermuda grass, and buffalo grass, which are all adapted to warmer temperatures.

While a lawn of one grass can be quite lovely, it also usually needs higher maintenance. A mix of grass types is more resistant to insects and diseases and more tolerant of site conditions such as shade and drought. Grass grows best with about 6 hours of sunlight daily. Kentucky bluegrass requires more sun than many other grasses, while fine fescues are more tolerant of shade and will do well on sites with only 4–6 hours of sunlight per day. If your lawn is very shady because of trees or surrounding buildings, you might want to use other ground covers instead of grass (see Other Ground Covers below). Your site may also have other conditions that require different grass types or ground coverings, such as a steep slope.

Grasses have adapted to many things, including developing resistance to a variety of pests (insects, diseases, weeds, and animals). Grasses are often infested with symbiotic fungi known as endophytes. Grasses for sale that have been enhanced with endophytes are much more resistant to many common insect pests because these fungi produce toxins that taste bad and are fatal to any insects that continue to eat the grass. The endophytes are present only in the aboveground part of the grass, so have no effect on root-feeding insects, such as white grubs. Examples of insects affected are chinch bugs and sod webworms. Grasses with stolons or rhizomes

can generally tolerate more damage like that caused by insect feeding, since they can replace the damaged sections of turf.

## To Seed or to Sod



When deciding whether to use seed or lay sod (strips of grass cut away from where they grew) to establish a lawn, you must consider several important factors. Sod is certainly an easy way to achieve an instant lawn;

however, it is more expensive than seeding a lawn and, like grass seed, it still requires daily watering after you have placed it to ensure that it becomes established.

The available grass varieties in sod may not be the best for the conditions where you live or may not suit your preference, while grass seed presents a greater selection. Until grass is established, it is at risk for competition from other plants (weeds) for space and resources. You may want to choose sod if an area has a high weed presence or potential, since it can smother many weeds. Unfortunately, it may also introduce them, along with insects and diseases.

When laying sod, place the pieces so that the seams line up at the middle of adjacent pieces. Don't stretch the pieces and don't overlap the edges. If your lawn has a slope, lay the sod across it rather than up and down it. Once the sod is in place, use a roller to go over it to press the roots into the soil. Keep your new sod well watered and don't walk on it while it is still wet.